PATENT

VIA FACSIMILE TRANSMISSION 1-571-273-8300 Atty. Docket No. 17938 (AT 20958-02091)

IN THE DRAWINGS:

Please replace Figure 1 on Sheet one of the drawings with the attached Replacement Sheet. No new matter has been added.

Remarks

Claims 1-20 remain pending in the present application, of which claims 8, 10, 18 and 20 have withdrawn from consideration. It is respectfully submitted that the pending claims define allowable subject matter.

Initially, the examiner is thanked for indicating claims 4 and 14 to be allowable if rewritten in independent form. The above claim amendments rewrite claims 4 and 14 in independent form.

With respect to the objection to the drawings, applicant continues to maintain that the original drawings completely and fully illustrate each and every feature of the claimed invention. As explained in previous responses, the features of claims 2 and 12 are described in the specification and are fully illustrated in the drawings. Nonetheless, to facilitate prosecution, a replacement sheet for Figure 1 is submitted herewith. In the replacement sheet, Figure 1 has been amended to illustrate a generic circuit board 7 having a common contact pad 9 formed thereon. The base portions 18 and 19 of the contact elements 10 and 14 are electrically joined to the common pad 9. Claims 2 and 12 define the first and second base portions to be formed separate from one another and configured to be joined to a common conductive path on the circuit board. The common conductive path is described at paragraph 20 as a common pad. As also described in paragraph 20, the base portions 18 and 19 may be joined to a common conductive path that constitutes electrical traces joined to one another on the circuit board 7. The amendments to Figure 1 simply illustrate general structures, namely a circuit board 7 and common pad 9 as clearly described in the original specification at paragraphs 20 and 23, among other places, and as clearly recited in the original claims. No new subject matter has been added.

Turning to the prior art rejections, claims 1-2, 5-7, 9, 11-12, 16-17 and 19 have been rejected under 35 USC § 102(e) as being anticipated by Johnescu. Claims 3 and 13 have been rejected under 35 USC § 103 as being unpatentable over Johnescu in view of Suzuki. Applicants respectfully traverse these rejections for reasons set forth hereafter.

Independent claims 1 and 11 recite, among other things, an electrical contact having first and second contact elements that are configured to be joined in an electrically common manner. Johnescu does not teach or suggest that individual contacts should be joined in an electrically common manner. Instead, Johnescu teaches that each and every contact beam should be maintained electrically separate and distinct and not joined in an electrically common manner. Attention is directed column 4, lines 30-63, that describe the embodiment of Figures 18–29 noted in the Outstanding Office Action. At column 4, lines 42-51, Johnescu describes the connector 300 to include four rows of mating areas 321. Within connector 300, each contact 303 represents a separate and distinct contact. Johnescu explains at column 4, lines 44-46 that the "contacts 303 are placed front to back so instead of two rows of top mating areas (e.g., mating areas 121), there are now four rows of top mating areas 321." Johnescu goes on to explain at column 4, lines 54-58 that the contacts 303 are arranged so that the mating areas 321 of "neighboring contacts are disposed at opposing ends." In addition, Johnescu states:

> "In other words, neighboring contacts are oriented in opposite directions. In this manner, each mating area 321 in a row of mating areas is separated from the next mating area 321 in that row by the end of a contact 303 that does not contain a mating area 321. This leads to a very compact connector." (column 4, lines 58-63).

From this discussion of Figures 18-29, it is clear that Johnescu teaches that each and every contact 303 should remain separate and distinct. Johnescu nowhere describes that adjacent contacts 303 should be joined in an electrically common manner. To the contrary, the above sections clearly illustrate that Johnescu intends for adjacent contacts 303 to not be electrically common.

In addition, claim 1 further requires that each of the first and second contact elements have first and second contact beams extending from the first and second base portions and projecting toward one another in an overlapping manner. This overlapping structure of a single contact is not taught or suggested by Johnescu. Instead, Johnescu teaches that each and every

contacts 303 should have a single beam and should be maintained electrically separate from one another.

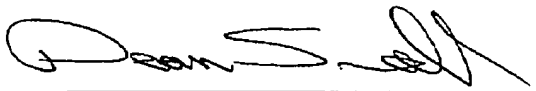
Claims 1 and 11 further define the overlapping first and second contact beams to carry equal amounts of current in the opposite directions such that electromagnetic fields created about the first and second contact beams by the currents offset and cancel out one another. This interaction of electromagnetic fields is achieved by joining the contact elements in an electrically common manner and orienting the first and second beams to project toward one another in the claimed overlapping pattern. As explained above, Johnescu's contacts 303 are all electrically separate from one another. No two adjacent contacts 303 are electrically common with one another. Thus, it necessarily follows, that no two adjacent contacts would ever carry equal amounts of current in opposite directions. It would similarly necessarily follow that the electromagnetic fields created about contacts 303 by the currents would not offset and would not cancel out one another. This is physically impossible when Johnescu maintains the contacts 303 to be electrically separate from one another. Thus, it is submitted that Johnescu does not teach or suggest the contact of claim 1 or the electrical socket of claim 11.

Turning to the obviousness rejection of claims 3 and 13, it is respectfully submitted that the person of ordinary skill would not have been motivated to modify Johnescu's contact in the suggested manner based on Suzuki. As explained above, Johnescu teaches that each and every contact 303 should be maintained separate to achieve a compact connector arrangement. Thus, Johnescu does not suggest interleaving portions of single contacts, but instead arranging adjacent separate contacts in opposite directions. Suzuki fails to make up for this deficiency of Johnescu. Suzuki describes a housing 10 having a plurality spring contacts 20 and 30. Each spring contact 20 includes a pair of spring sections 21, while each spring contact 30 includes a pair of springs sections 31. The spring sections 21 and the spring sections 31 are not interleaved with one another. The contacts 20 and 30 are arranged adjacent one another, but not in an overlapping manner. Thus, both Johnescu and Suzuki suffer a common deficiency. Neither Johnescu nor Suzuki suggest to interleave portions of a single contact where the single contact includes first and second contact beams that project toward one another in an overlapping pattern. Claims 3

and 13 clearly define the first contact beam to include a pair of contact beams formed with a common base portion, while the second contact beam extends between the pair of contact beams from the first contact element. Johnescu and Suzuki simply lack any such structure or any motivation to form such structure.

In view of the foregoing, it is respectfully submitted that the pending claims define allowable subject matter. Should anything remain in order to place the present application in condition for allowance, the examiner is kindly invited to contact the undersigned at the telephone number listed below.

Respectfully Submitted,



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